

**What is claimed is:**

1. A device for reduction of exhaust gas and fuel economy comprising:  
an inlet housing connected to a fuel pipe of a  
5 fuel tank; a first permanent magnet fitted in the inlet housing and having a hole in the center thereof; an outlet housing coupled with the inlet housing by coupling means at one end and connected to a fuel pipe to an engine at the other end; a second permanent  
10 magnet fitted in the outlet housing to have the same pole opposing the first permanent magnet and having a hole in the center thereof; a partition located between the housings to separate them and having a hole for passing the fuel in the central thereof; a third  
15 permanent magnet mounted on one side of the partition and having a hole in the center thereof; a fourth permanent magnet mounted on the other side of the partition and having a hole in the center thereof; a first ball inserted in the hole of the fourth permanent  
20 magnet and moving back and forth to turn the fuel into particulates; a sleeve mounted on the other side of the partition and having a hole for passing the fuel in the center thereof; a second ball inserted in the hole for passing the fuel of the sleeve and moving back and

forth by magnetic force of the fourth permanent magnet, to turn the fuel into particulates; a cap mounted on one side of the sleeve and having a hole for passing the fuel in the center thereof and a plurality of fuel supply holes in its periphery to supply the fuel to a combustion chamber when the hole for passing the fuel of the sleeve is opened by stepping on an accelerator; a first diffusion fan mounted in the inlet housing to diffuse the fuel; and a second diffusion fan mounted in the outlet housing to further diffuse the fuel.

2. A device as claimed in claim 1, wherein each of the first and the second diffusion fans comprises a plurality of diffusion wings formed in the shape of propellers.

3. A device as claimed in claim 2, wherein the diffusion wings of the first and the second diffusion fans are respectively connected to the inner walls of the inlet housing and the outlet housing.

4. A device as claimed in claim 1, wherein the first ball of metallic material inserted in the hole of the fourth permanent magnet keeps the interval (t) of

about 0.05 to 1.0mm with the hole.